Change Number	Federal Facility Agreement and Consent Order Change Control Form	Date
M-60-93-01	Do not use blue ink. Type or print using black ink.	Jan. 25, 1994

Originator W. C. Miller Phone (509) 372-0255

Class of Change
[X] I - Signatories [ ] II - Project Manager [ ] III - Unit Manager

Change Title
Establish milestones for immobilization of low level tank waste

Description/Justification of Change
New milestones for the immobilization of low level waste resulting from processing Hanford tank waste are being established to reflect the results of Tank Waste Remediation System rebaselining by the DOE, negotiations among the three parties to the Tri Party Agreement, and values received from the public, stakeholders and other affected parties. This change request embodies the decision to implement a glass low level waste (LLW) form and to design, construct and operate a LLW vitrification facility. The DOE will maintain in a standby condition the capability to restart the grout facility if its operation is necessary before new double shell tanks are available to provide tank space to resolve safety issues. Treatment and disposal of low level waste is considered to be a critical path item for retrieval of waste from the single-shell tanks and closure of the single-shell tank farms. The following milestones and target dates are established for this activity:

M-60-00	Complete vitrification of Hanford low level tank waste	December 2028
M-60-01	Begin LLW melter testing with simulants	September 1994

(Continued on next page)

Impact of Change
This change eliminates the M-01 series of milestones for Grout operations and establishes a new series (M-60) for low level waste vitrification.

Affected Documents
Hanford Federal Facility Agreement and Consent Order Action Plan, Appendix D

Approvals X Approved ___Disapproved

This change form approved by Amendment Four to the Hanford Federal Facility Agreement and Consent Order executed by the signatories on January 25, 1994.

John Wagoner — DOE — January 25, 1994 — Date

Gerald Emison — EPA — January 25, 1994 — Date

Mary Riveland — Ecology — January 25, 1994 — Date

Description/Justification of Change, continued

M-60-01A	Define and issue LLW simulant recipe (and basis) for initial melter tests	May 1994
M-60-01-T01	Award contract with first vendor to conduct LLW melter tests with simulants	June 1994
M-60-02	Complete melter feasibility and system operability tests, select reference melter(s), and establish reference LLW glass formulation which meets complete system requirements	June 1996
M-60-03	Submit conceptual design and initiate definitive design of the LLW vitrification facility	November 1996
M-60-03-T01	Submit Facility Options Engineering Study This study will include an evaluation of worker radiation exposure, radionuclide separation, in-process storage, and shielding requirements.	June 1994
M-60-04	Initiate construction of the LLW vitrification facility	December 1997
M-60-05	Initiate hot operations of the LLW vitrification facility	June 2005
M-60-05-T01	Complete construction of the LLW vitrification facility	December 2003

The strategy for LLW treatment is based on the following:

- Early melter development tests will demonstrate the viability of vitrification as a suitable tank low-level tank waste treatment.

- Operation of LLW vitrification will use pretreated double-shell slurry feed as early feed, as well as SST saltcake.

- As part of conceptual design, a LLW vitrification facility radiation shielding requirement will be established, predicated upon removal of cesium and strontium from the tank waste by the pretreatment function.

- The LLW immobilization facility will be designed based upon testing using simulants, lab and bench-scale testing of radioactive waste samples, and cold testing of facility components. A hot pilot plant will not be required for verification of design concept.

- The LLW immobilization facility will use industrial, high throughput melter(s).

- This facility will be granted interim status to allow construction. A final dangerous waste permit will be required prior to initiation of hot operations. Prior to construction, DOE will be required to obtain a letter from Ecology authorizing construction. This authorization will be based on Ecology's ongoing review of melter development and facility design to ensure compliance with appropriate environmental regulatory requirements.

IT IS SO AGREED:

Each undersigned representative of a Party certifies that he or she is fully authorized to enter into this Agreement and Action Plan and to legally bind such Party to this Agreement and Action Plan. These change requests and amendments shall be effective upon the date on which this amendment agreement is signed by the Parties. Except as amended herein, the existing provisions of the Agreement shall remain in full force and effect.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY:

Gerald Emison — Date 1-25-94
Acting Regional Administrator
Region 10
U.S. Environmental Protection Agency

FOR THE UNITED STATES DEPARTMENT OF ENERGY:

John Wagoner — Date 1/25/94
Manager
U.S. Department of Energy
Richland Operations Office

FOR THE WASHINGTON STATE DEPARTMENT OF ECOLOGY:

Mary Riveland — Date 1/25/94
Director
State of Washington
Department of Ecology